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**IN THE CLAIMS:**

Please amend claims 25, 34 and 37-48 and add claim 49 as follows.

Claims 1-24. (Cancelled)

25. (Currently Amended) A method for processing a signal in a telecommunications system, the method comprising:

forming a sample set from received signals and forming a set of absolute values from absolute values of sample set elements, the method further comprising:

- A) arranging the elements of the absolute value set in the ascending order;
- B) setting a threshold value;
- C) determining the number of elements of a reference set to be formed;
- D) forming a reference set comprising a predetermined number of elements of the absolute value set in the ascending order;
- E) computing a reference value by multiplying the mean or median of the reference set by the threshold value;
- F) comparing the greatest element of the reference set with the reference value;
- 13 G) increasing the number of reference set elements for forming a new reference set when the greatest reference set element is smaller than the reference value;
- H) reiterating the preceding steps D to G at least one of forming a reference set, computing a reference value, comparing the greatest element of the reference set or

increasing the number of reference set elements, until a predetermined ending condition is fulfilled;

H) forming an accepted absolute value set and a corresponding sample set by deleting the greatest element from the reference set when the predetermined ending condition is fulfilled.

21 ~~for detecting the Rx signals~~  
N for detecting the signal /

26. (Previously Presented) A method according to claim 25, wherein the threshold value is set according to Rayleigh distribution.

27. (Previously Presented) A method according to claim 25, wherein the ending condition is fulfilled when the greatest element of the reference set is greater than the reference value.

28. (Previously Presented) A method according to claim 25, the method further comprising estimating the power of the received signal on the basis of the mean of the squares of the absolute values of the elements in the accepted sample set.

29. (Previously Presented) A method according to claim 25, the method further comprising estimating the power of the received signal on the basis of the sample set accepted with the Rayleigh distribution method.

30. (Previously Presented) A method according to claim 25, the method being used for cancelling the interference of the received signal.

31. (Previously Presented) A method according to claim 25, the method being used for separating signal-noise subspaces of the received signal.

32. (Previously Presented) A method according to claim 25, the method being used for dividing the received signal into acceptable samples and samples to be rejected.

33. (Previously Presented) A method according to claim 25, wherein there is an odd number of reference set elements, and the method further comprises:

forming a second reference value by multiplying the threshold value by the mean of the middlemost element and the element preceding it in the absolute value set;

comparing the second greatest element of the absolute value set with the second reference value;

deleting the greatest element from the accepted absolute value set when the greatest element of the accepted absolute value set is greater than the second reference value;

preserving the accepted absolute value set and the accepted sample set corresponding to it when the greatest element of the accepted absolute value set is smaller than the second reference value.

34. (Currently Amended) A method according to claim 25, the method further comprising:

- J) computing sum S of the elements of the accepted absolute value set;
- K) computing number P of elements of the accepted absolute value set;
- L) receiving the following sample element;
- M) forming a third reference value by multiplying the threshold value by the quotient of S and P;
- N) setting a forgetting parameter;
- O) comparing the absolute value of the sample element with a third reference value;
- P) computing a new value of S by multiplying the forgetting parameter by S and by adding the sample element value when the absolute value of the sample element is smaller than the third reference value;
- Q) computing a new value of P by multiplying the forgetting parameter by P and by adding number one when the absolute value of the sample element is smaller than the third reference value;
- R) handling the sample value as a deviating sample when the absolute value of the sample element is greater than the third reference value;
- S) reiterating the preceding steps L to R at least one of receiving the following sample elements, forming a third reference value, setting a forgetting parameter,

comparing the absolute value, computing a new value of S, computing a new value of P,  
or handing the sample value as a deviating sample a desired number of times or until  
there are no more sample elements. *for detecting the received*

35. (Previously Presented) A method according to claim 34, the method comprising setting the sample element handled as a deviating sample to be zero.

36. (Previously Presented) A method according to claim 34, wherein the forgetting parameter is a value between zero and one.

37. (Currently Amended) *for processing & detecting a signal*  
~~A receiver~~ An apparatus, comprising:  
sample forming device configured to ~~means for forming~~ a sample set from received signals and absolute value forming device configured to ~~means for forming~~ a set of absolute values from the absolute values of sample set elements, wherein the apparatus ~~receiver~~ further comprises:

A) an arranging means for device configured to arrange ~~ing~~ the elements of the absolute value set in the ascending order;

B) a setting means for device configured to set ~~ting~~ a threshold value;

C) a determining means for device configured to determine ~~ing~~ the number of elements of a reference set to be formed;

10 D) ~~a forming means for device configured to forming~~ a reference set comprising a predetermined number of elements of the absolute value set in the order of magnitude;

E) ~~a computing means for device configured to compute ing~~ a reference value by multiplying the mean or median of the reference set by the threshold value;

F) ~~a comparing means for device configured to compare ing~~ the greatest element of the reference set with the reference value;

G) ~~an increasing means for device configured to increase ing~~ the number of reference set elements for forming a new reference set when the greatest reference set element is smaller than the reference value;

H) ~~an iterating means for device configured to reiterate ing the preceding steps D to G~~ at least one of arranging, setting, determining, forming, computing, comparing or increasing until a predetermined ending condition is fulfilled;

I) ~~a forming means for device configured to form ing~~ an accepted absolute value set and a corresponding sample set by deleting the greatest element from the reference set

25 when the predetermined ending condition is fulfilled. ~~to detect the signals~~  
*for detecting the signal.*

38. (Currently Amended) The apparatus ~~A receiver~~ according to claim 37, wherein the setting ~~means for setting a threshold value~~ are device is configured to set the threshold value on the basis of Rayleigh distribution.

39. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver comprises ~~means for~~ an observing device configured to observe ~~ing~~ that the greatest element is greater than the reference set and ~~means for~~ an indicating device configured to indicate ~~ing~~ that the ending condition has been fulfilled.

40. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver comprises an estimating means for ~~device configured to~~ estimate ~~ing~~ the power of the received signal on the basis of the mean of the squares of the absolute values in the accepted sample set.

41. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver comprises an estimating means for ~~device configured to~~ estimate ~~ing~~ the power of the received signal on the basis of the sample set accepted with the Rayleigh distribution method.

42. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver is arranged to cancel interference of the received signal.

43. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver is arranged to separate signal-noise subspaces of the received signal.

44. (Currently Amended) The apparatus ~~A receiver~~ according to claim 37, wherein the apparatus receiver is arranged to divide the received signal into acceptable samples and samples to be rejected.

45. (Currently Amended) . The apparatus ~~A receiver~~ according to claim 37, wherein there is an odd number of elements in the reference set and the receiver further comprises:

a forming means for device configured to forming a second reference value by multiplying the threshold value by the mean of the middlemost element and the element preceding it in the accepted absolute value set;

a comparing means for device configured to comparing the greatest value of the accepted absolute value set with the second reference value;

a deleting means for device configured to deleting the greatest element from the accepted absolute value set when the greatest element of the accepted absolute value set is greater than the second reference value;

a preserving means for device configured to preserve ing the remaining absolute value set and the accepted sample set corresponding to it when the greatest value of the accepted absolute value set is smaller than the second reference value.



46. (Currently Amended) The apparatus A ~~receiver~~ according to claim 37, wherein the apparatus receiver further comprises:

J) ~~a computing means for~~device configured to compute ~~ing~~ sum S of the elements of the accepted absolute value set;

K) ~~a computing means for~~device configured to compute ~~ing~~ number P of elements of the accepted absolute value set;

L) ~~a receiving means for~~device configured to receive ~~ing~~ the following sample element;

M) ~~a forming means for~~device configured to form ~~ing~~ a third reference value by multiplying the threshold value by the quotient of S and P;

N) ~~a setting means for~~device configured to setting a forgetting parameter;

O) ~~a comparing means for~~device configured to compare ~~ing~~ the absolute value of the sample element with the third reference value;

P) ~~a computing means for~~device configured to compute ~~ing~~ a new value of S by multiplying the forgetting parameter by S and by adding the sample value when the absolute value of the sample is smaller than the third reference value;

Q) ~~a computing means for~~device configured to compute ~~ing~~ a new value of P by multiplying the forgetting parameter by P and by adding number one when the absolute value of the sample element is smaller than the third reference value;

R) ~~a handling means for~~ device configured to handle ~~ing~~ the sample value as a deviating sample when the absolute value of the sample element is greater than the third reference value;

S) ~~an iterating means for~~ device configured to reiterate ~~ing the preceding steps L to R at least one of receiving, forming, setting, comparing, computing a new value of S, computing a new value of P or handling,~~ a desired number of times or until there are no more sample elements.

47. (Currently Amended) The apparatus ~~A receiver~~ according to claim 46, wherein the apparatus ~~receiver~~ is arranged to set the sample element handled as a deviating sample to be zero.

48. (Currently Amended) The apparatus ~~A receiver~~ according to claim 46, wherein the apparatus ~~receiver~~ is arranged to set the value of the forgetting parameter between zero and one.

49. (New) A receiver, comprising:

means for forming a sample set from received signals and means for forming a set of absolute values from the absolute values of sample set elements,

arranging means for arranging the elements of the absolute value set in the

ascending order;

6 setting means for setting a threshold value;

determining means for determining the number of elements of a reference set to be formed;

forming means for forming a reference set comprising a predetermined number of elements of the absolute value set in the order of magnitude;

computing means for computing a reference value by multiplying the mean or median of the reference set by the threshold value;

comparing means for comparing the greatest element of the reference set with the reference value;

increasing means for increasing the number of reference set elements for forming a new reference set when the greatest reference set element is smaller than the reference value;

iterating means for reiterating the preceding steps D to G until a predetermined ending condition is fulfilled;

forming means for forming an accepted absolute value set and a corresponding sample set by deleting the greatest element from the reference set when the

22 predetermined ending condition is fulfilled. ~~Detect the signals~~  
~~Detected thereafter~~  
For Detecting the  
Signal.